IN THE CLAIMS

The following listing of the claims is provided in accordance with 37 C.F.R.
§1.121.

1.   (currently amended)   A method for processing image data comprising:

identifying a first group of pixels exhibiting a first characteristic, wherein the first
characteristic corresponds to structures in the image data;

identifying a second group of pixels exhibiting a second characteristic, wherein the
second characteristic corresponds to non-structures in the image data;

identifying a third group of pixels exhibiting the first and second characteristics;

processing the first group of pixels in accordance with at least a first operation;

processing the second group of pixels in accordance with at least a second
operation;

processing the third group of pixels in accordance with the at least first and second
operations; and

blending values resulting from processing of the third group of pixels by the first
process with values resulting from processing of the third group of pixels by the second
process.

2.   (original)   The method of claim 1, comprising combining the blended
values with values of pixels from the first and second groups resulting from their respective
processing.

3.   (canceled)

4.   (currently amended)   The method of claim 1, comprising establishing first
and second thresholds, and wherein the first group of pixels are identified as having values
falling above [[below]] the first threshold, the second group of pixels are identified as

having values falling <u>below</u> [[above]] the second threshold, and the third group of pixels are identified as having values between the first and second thresholds.

5. (original) The method of claim 4, wherein the thresholds are gradient thresholds.

6. (original) The method of claim 4, wherein the blending is performed based upon relative proximity of each pixel value to the first and the second threshold.

7. (original) The method of claim 6, wherein the blending is based on a linear function.

8. (canceled)

9. (original) The method of claim 1, wherein the operations are selected from a group consisting of enhancement, sharpening, smoothing, deconvolution, extrapolation, interpolation, compression, digital half-toning, and contrast matching.

10. (original) The method of claim 1, wherein the third group of pixels are processed in accordance with the first operation along with the first group of pixels, and are processed in accordance with the second operation along with the second group of pixels.

11. (currently amended) A method for processing image data comprising:
establishing first and second thresholds;
identifying a first group of pixels having a <u>value</u> [[values]] falling <u>above</u> [[below]] the first threshold<u>, wherein the first threshold corresponds to structures in the image data</u>;
identifying a second group of pixels having a value falling <u>below</u> [[above]] the second threshold<u>, wherein the second threshold corresponds to non-structures in the image data</u>;

identifying a third group of pixels having a value between the first and second thresholds;

processing the first group of pixels in accordance with at least a first operation;

processing the second group of pixels in accordance with at least a second operation; and

processing the third group of pixels in accordance with the at least first and second operations.

12.   (original)   The method of claim 11, comprising blending values resulting from processing of the third group of pixels by the first process with values resulting from processing of the third group of pixels by the second process.

13.   (original)   The method of claim 11, wherein the thresholds are gradient thresholds.

14.   (currently amended)   The method of claim 12 [[11]], wherein the blending is performed based upon relative proximity of each pixel value to the first and the second threshold.

15.   (currently amended)   The method of claim 12 [[11]], wherein the blending is based on a linear function.

16.   (canceled)

17.   (original)   The method of claim 11, wherein the operations are selected from a group consisting of enhancement, sharpening, smoothing, deconvolution, extrapolation, interpolation, compression, digital half-toning, and contrast matching.

18.   (original)   The method of claim 11, wherein the third group of pixels are processed in accordance with the first operation along with the first group of pixels, and are processed in accordance with the second operation along with the second group of pixels.

19.   (original)   The method of claim 11, comprising combining the blended values with values of pixels from the first and second groups resulting from their respective processing.

20.   (currently amended)   A system for processing image data comprising:
a data repository for storing image data;
a processing circuit configured to access image data from the repository, to separate the data representative of pixels into first and second groups and an overlapping group, to process the first and second groups in accordance with first and second operations, respectively, and to process the third group in accordance with both the first and second operations, and to combine the results of the processing to obtained processed image data, wherein the first group corresponds to structures in the image data and the second group corresponds to non-structures in the image data.

21.   (original)   The system of claim 20, further comprising an operator workstation for configuring the operations and for viewing images resulting from the processing.

22.   (original)   The system of claim 20, further comprising an image data acquisition system for generating the image data.

23.   (original)   The system of claim 22, wherein the image data acquisition system is selected from a group consisting of MRI systems, CT systems, PET systems, ultrasound systems, X-ray systems and photographic systems.

24.   (currently amended)   A system for processing image data comprising:

means for identifying a first group of pixels exhibiting a first characteristic, wherein the first characteristic corresponds to structures in the image data;

means for identifying a second group of pixels exhibiting a second characteristic, wherein the second characteristic corresponds to non-structures in the image data;

means for identifying a third group of pixels exhibiting the first and second characteristics;

means for processing the first group of pixels in accordance with at least a first operation;

means for processing the second group of pixels in accordance with at least a second operation;

means for processing the third group of pixels in accordance with the at least first and second operations; and

means for blending values resulting from processing of the third group of pixels by the first process with values resulting from processing of the third group of pixels by the second process.

25.   (currently amended)   A system for processing image data comprising:

means for establishing first and second thresholds;

means for identifying a first group of pixels having a value [[values]] falling above [[below]] the first threshold characteristic, wherein the first threshold corresponds to structures in the image data;

means for identifying a second group of pixels having a value falling below [[above]] the second threshold characteristic, wherein the second threshold corresponds to non-structures in the image data;

means for identifying a third group of pixels having a value between the first and second thresholds;

means for processing the first group of pixels in accordance with at least a first operation;

means for processing the second group of pixels in accordance with at least a second operation; and

means for processing the third group of pixels in accordance with the at least first and second operations.

26.   (currently amended)   A computer storage medium storing therein a computer program for processing image data comprising:

~~at least one machine readable medium; and~~

machine readable code stored on the at least one medium for carrying out routines for identifying a first group of pixels exhibiting a first characteristic, identifying a second group of pixels exhibiting a second characteristic, identifying a third group of pixels exhibiting the first and second characteristics, processing the first group of pixels in accordance with at least a first operation, processing the second group of pixels in accordance with at least a second operation, processing the third group of pixels in accordance with the at least first and second operations, and blending values resulting from processing of the third group of pixels by the first process with values resulting from processing of the third group of pixels by the second process, wherein the first characteristic corresponds to structures in the image data and the second characteristic corresponds to non-structures in the image data.

27.   (currently amended)   A computer storage medium storing therein a computer program for processing image data comprising:

~~at least one machine readable medium; and~~

machine readable code stored on the at least one medium for carrying out routines for establishing first and second thresholds, identifying a first group of pixels having a value [[values]] falling above [[below]] the first threshold, identifying a second group of pixels having a value falling below [[above]] the second threshold, identifying a third group

of pixels having a value between the first and second thresholds, processing the first group of pixels in accordance with at least a first operation. processing the second group of pixels in accordance with at least a second operation, and processing the third group of pixels in accordance with the at least first and second operations, wherein the first threshold corresponds to structures in the image data and the second threshold corresponds to non-structures in the image data.

28.   (currently amended)   A computer memory device storing an [[An]] image produced by the method of claim 1.

29.   (currently amended)   A computer memory device storing an [[An]] image produced by the method of claim 11.